

CELLULAR COMMUNICATIONS CHANNELIZER

ABSTRACT OF THE DISCLOSURE

A channelizer (224) for recovering communication channels is connected to a resampling filter (204) having an input connection (308) on which data arrives at an input data rate, and an output connection (310) on which data exits at an output data rate. The channelizer (224) further comprises an n-point discrete Fourier transform (DFT) circuit (208) coupled to the output data rate output (226) and a plurality of individual recovered channel outputs (210) coupled to the DFT circuit (208). Resampling circuitry (302, 306) in the resampling filter (204) converts the input data rate to the output data rate in a manner commensurate with a preselected communication channel spacing, communication channel output sample rate, and number of communication channels. The DFT circuit (208) may use (n-m) point overlap and the channelizer (224) may further include a polyphase filter (206) implementing n/m oversampling coupled between the resampling filter (204) and the DFT circuit (208).